A randomised clinical trial investigating the efficacy of the use of the Brantingham Protocol versus Hallux Abducto Valgus night splint, in the treatment of painful Hallux Abducto Valgus

By

Morne, Pieter du Plessis

A Dissertation submitted to the

Faculty of Health Sciences, University of Johannesburg,
As partial fulfillment for the Masters degree in Technology:
In the programme Chiropractic

Supervisor : _____ Date : _____
Dr. Birdsey (M-Tech Chiropractic)

Co-Supervisor : _____ Date : _____
Mr. Zipfel (N.H.D. Podiatry ; BSc(Hons))

Johannesburg, 2005

DECLARATION

I declare that this dissertation is my own, unaided work. It is being submitted for the Degree of Master of Technology at the University of Johannesburg, Johannesburg. It has not been submitted before for a degree or examination in any other Technikon or University.

Signature of Candidate: _____

On this the _____of _____2005

DEDICATION

Thank you to my family for their love and support during my studies.
Times with you are precious and valuable.

Thank you to my fiancé, Adele, my words are lacking to express all that you have done for me, your love, time, patience and help, which no one will really understand, these principals in our relationship will be steps to greater heights.

To my Heavenly Father, that the world will realize the Truth and who You are, that they will know Your mercy rather than your judgment. You are the Infinite One, All-powerful and yet Your presence dwells with us. Man lacks understanding. Jesus truly the Name above all names.

John 3:16-
For God so loved the world that He sent His only begotten Son,
Jesus, that whosoever believes in Him will not perish but have truly everlasting life.

ABSTRACT

Hallux Abducto Valgus (HAV) is a common cause of foot pain causing deformity and often disability. The female population is more frequently affected by HAV than the male population with the two main causative factors being congenital and inappropriate footwear. Surgery is the most prevalent treatment, but it does not take into consideration the biomechanical effects on the biomechanical chain and therefore the deformity frequently reoccurs and complications after surgery are many.

The aim of this study is to compare the efficacy of the Brantingham protocol versus the HAV Night Splint in the treatment of painful HAV.

Thirty participants were selected to participate in the study and certain criteria had to be met. Participants were randomly divided into two groups, Group 1 was treated using a chiropractic protocol. The Brantingham Protocol that consisted of mobilization and specific adjustment of the first metatarsophalangeal joint was used. Group 2 was treated by the use of a HAV Night Splint.

Patients were treated over a 2-week period, twice a week with a 1-week follow up and a 1-month follow up. The lasting effect of the individual treatments was determined by the follow-up periods. Objective and subjective measurements were taken at each visit. Subjective measurements consisted of the McGill pain questionnaire (Melzack, 1975) (Appendix D), visual analogue scale (Masarsky and Todres-Masarsky, 2001) (Appendix B) and the foot function index pain scale (Saag **et al.,** 1996) (Appendix C). Objective measurements consisted of passive Plantar and Dorsiflexion of the First metatarsophalangeal joint.

The results indicated a statistical and numerical significance within and between each group both subjectively and objectively. Group 1 proved to be superior to Group 2 in the treatment of painful HAV.

In conclusion, both the Brantingham Protocol and the HAV Night Splint proved to be effective in the treatment of painful HAV. However, Group 1 proved to be superior to Group 2 in the treatment of painful HAV.

ACKNOWLEDGEMENTS

I would like to thank Dr. Paul Birdsey, for his time and effort in helping me with the dissertation.

Thanks to my co-supervisor, Mr. Bernhard Zipfel, your time, valued opinion and helpfulness added a greater quality to this dissertation.

Thank you to Dr. Adele Vermeulen for your time, hard work and patience in helping me is immensely appreciated.

To caxTon newspapers who advertised this study.

Thanks to Mr. De Villiers for his help in the statistical part of the study.

Table of contents Page

List of Figures

List of Graphs

List of Tables

List of Appendices